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Multicomponent order parameter in the YBa2Cu3O 7-δ

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Abstract

We have analyzed the temperature dependencies of the superfluid density in YBa2Cu3O7 along a- and b- crystallographic axes using the multicomponent order parameter for the superconducting gap. Estimated values of the gap components for the d-wave and the isotropic s-wave are Δ d =29 meV and Δ s =5 meV, correspondingly. Band structure parameters were taken accordingly ARPES and neutron scattering data. © 2013 Springer Science+Business Media New York.

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Keywords

Multicomponent order parameter, Superconductivity, Superfluid density